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Vermette & Co.

Barristers & Solicitors
Patent & Trademark Agents

Box 40, Granville Square
Suite 230, 200 Granville Street
Vancouver, British Columbia
CANADA V6C 1S4

Telephone: (604) 331 0381
Facsimile: (604) 331 0382
E-mail: ip@vermetteco.com
Website: www.vermetteco.com

January 24, 2005

VIA FACSIMILE (011-41-22-740-14-35)

International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Dear Sirs/Mesdames:

RE: PCT Patent Application No. PCT/CA03/01514
Int'l Filing Date: October 1, 2003
Title: MULTIPLE PLATE COMBUSTOR
Inventor: Mehrzad Movassaghi
Applicant: Powertech Industries Inc., et al.
Priority: Italian Patent Application No. T02002A00850 filed October 1, 2002
Our File: 1491-143

In response to the International Search Report dated November 23, 2004, and in respect of Article 19, Applicant hereby amends the claims of the present application and submits the following explanatory remarks. Replacement pages and mark up pages showing the Amendments are enclosed.

Applicant has amended claims 5 – 6 and canceled claims 10 – 11.

Yours truly,

VERMETTE & CO.

Clifford W. Vermette
pc. Clifford W. Vermette
Agent for the Applicant

CWV/jla/kjg

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4. A pulse combustor according to claim 1, wherein each of said plates is made of spiral wound hollow stainless steel tubing.
- 5 5. A pulse combustor according to claim 4, wherein said outer plates each have a conical region proximate said combustion chamber, which conical region extends outwardly.
6. A pulse combustor according to claim 4, including
10 spacers between each plate to set the separation between adjacent plates.
7. A pulse combustor according to claim 6, wherein said burner assembly further includes a parabolic cone mounted
15 inside said elongated hollow tube with a circular end of said parabolic cone aligned with one end of said hollow elongated tube.
8. A pulse combustor according to claim 1, including an
20 inlet to said coolant passageway at a periphery thereof and an outlet from said coolant passageway proximate a center of said so that coolant flow is counter to ignited gas flow through said tailpipe regions.
- 25 9. A pulse combustor according to claim 6, wherein said hollow elongated tube is cylindrical and has a plurality of radially spaced apart elongated slots extending along a length of its cylindrical surface and including a plurality of elongated nozzle assemblies having nozzle openings spaced
30 along its length, said nozzle assemblies having a plenum

accessing said nozzle openings and each nozzle assembly
affixed to an outer surface of said cylinder over an
associated slot.

1 5

4. A pulse combustor according to claim 1, wherein each of said plates is made of spiral wound hollow stainless steel tubing.
- 5 5. A pulse combustor according to claim 14, wherein
~~including a flame spreader mounted in said combustion~~
~~chamber on an interior side of a hub affixed to an outer~~
~~plates opposite to said burner and operative to direct a~~
~~flow of ignited gas between said outer and intermediate~~
10 plates each have a conical region proximates said
combustion chamber, which conical region extends
outwardly.
6. A pulse combustor according to claim 14, including
15 ~~spacers a burner assembly mounted in said combustion~~
~~chamber having a elongated hollow tube with nozzle~~
~~openings spaced around a cylindrical surface thereof to~~
~~equalize gas flow into tailpipe regions between each~~
~~adjacent ones of said intermediate and outer plates to~~
20 set the separation between adjacent plates.
7. A pulse combustor according to claim 6, wherein said burner assembly further includes a parabolic cone mounted inside said elongated hollow tube with a circular end of
25 said parabolic cone aligned with one end of said hollow elongated tube.
8. A pulse combustor according to claim 1, including an inlet to said coolant passageway at a periphery thereof
30 and an outlet from said coolant passageway proximate a

center of said so that coolant flow is counter to ignited gas flow through said tailpipe regions.

9. A pulse combustor according to claim 6, wherein said
5 hollow elongated tube is cylindrical and has a plurality
of radially spaced apart elongated slots extending along
a length of its cylindrical surface and including a
plurality of elongated nozzle assemblies having nozzle
openings spaced along its length, said nozzle assemblies
10 having a plenum accessing said nozzle openings and each
nozzle assembly affixed to an outer surface of said
cylinder over an associated slot.

10. ~~A burner assembly for use in a combustion chamber,~~
15 ~~comprising:~~

~~— (a) an elongated hollow tube, having a plurality of
nozzle openings along its cylindrical surface,~~

20 ~~— (b) a parabolic cone mounted inside said elongated
hollow tube with a circular end of said parabolic cone
aligned with one end of said hollow elongated tube,~~

~~— wherein said hollow tube is couplable to a burner
25 nozzle such that upon ignition of a fuel mixture in said
hollow tube, ignited gas escapes uniformly around and
along said hollow tube.~~

11. ~~A burner assembly according to claim 10, wherein
30 said elongated hollow tube is cylindrical and has a
plurality of radially spaced apart elongated slots
extending along a length of its cylindrical surface and~~

~~including a plurality of elongated nozzle assemblies
having nozzle openings spaced along its length, said
nozzle assemblies having a plenum accessing said nozzle
openings and each nozzle assembly affixed to an outer
5 surface of said cylinder over an associated slot.~~

4. A pulse combustor according to claim 1, wherein each of said plates is made of spiral wound hollow stainless steel tubing.

5 5. A pulse combustor according to claim 1, including a flame spreader mounted in said combustion chamber on an interior side of a hub affixed to an outer plate opposite to said burner and operative to direct a flow of ignited gas between said outer and intermediate plates.

10 6. A pulse combustor according to claim 1, including a burner assembly mounted in said combustion chamber having a elongated hollow tube with nozzle openings spaced around a cylindrical surface thereof to equalize gas flow into
15 tailpipe regions between adjacent ones of said intermediate and outer plates.

7. A pulse combustor according to claim 6, wherein said burner assembly further includes a parabolic cone mounted
20 inside said elongated hollow tube with a circular end of said parabolic cone aligned with one end of said hollow elongated tube.

8. A pulse combustor according to claim 1, including an
25 inlet to said coolant passageway at a periphery thereof and an outlet from said coolant passageway proximate a center of said so that coolant flow is counter to ignited gas flow through said tailpipe regions.

9. A pulse combustor according to claim 6, wherein said hollow elongated tube is cylindrical and has a plurality of radially spaced apart elongated slots extending along a length of its cylindrical surface and including a plurality of elongated nozzle assemblies having nozzle openings spaced along its length, said nozzle assemblies having a plenum accessing said nozzle openings and each nozzle assembly affixed to an outer surface of said cylinder over an associated slot.

10. A burner assembly for use in a combustion chamber, comprising:

(a) an elongated hollow tube, having a plurality of nozzle openings along its cylindrical surface;

(b) a parabolic cone mounted inside said elongated hollow tube with a circular end of said parabolic cone aligned with one end of said hollow elongated tube,

wherein said hollow tube is couplable to a burner nozzle such that upon ignition of a fuel mixture in said hollow tube, ignited gas escapes uniformly around and along said hollow tube.

11. A burner assembly according to claim 10, wherein said elongated hollow tube is cylindrical and has a plurality of radially spaced apart elongated slots extending along a length of its cylindrical surface and including a plurality of elongated nozzle assemblies having nozzle openings spaced

along its length, said nozzle assemblies having a plenum accessing said nozzle openings and each nozzle assembly affixed to an outer surface of said cylinder over an associated slot.

5

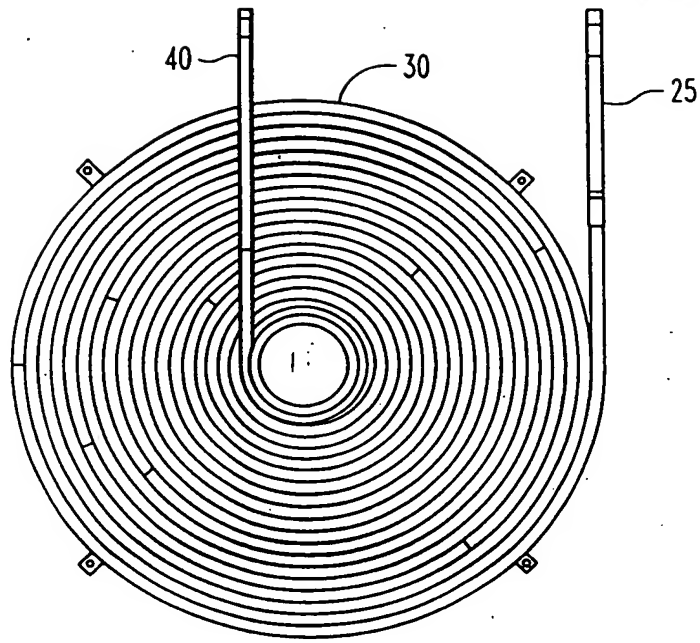


FIG. 2A

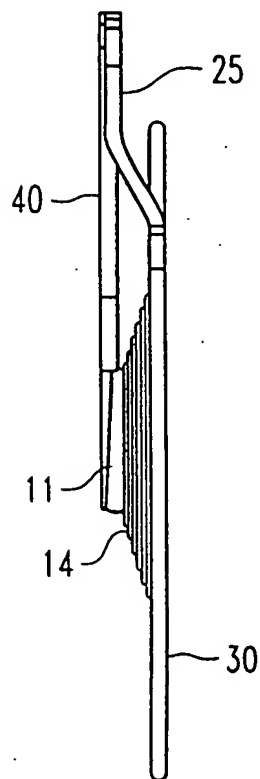


FIG. 2B

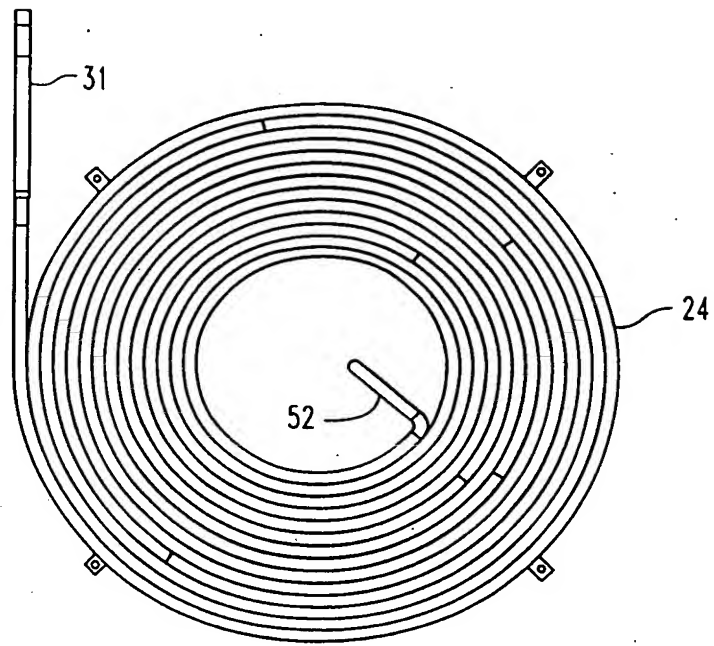


FIG. 3A

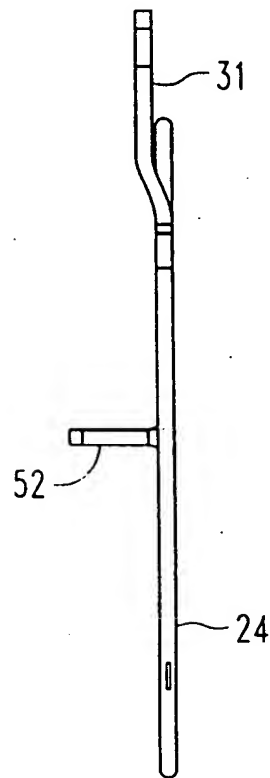


FIG. 3B

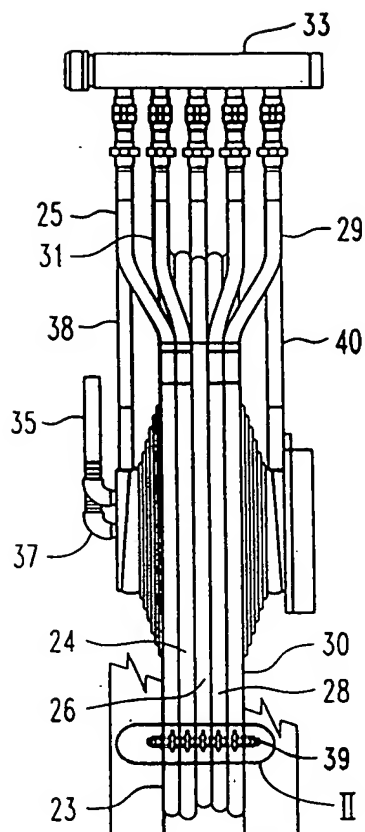


FIG. 4A

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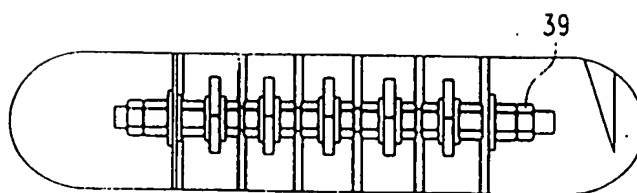


FIG. 4B

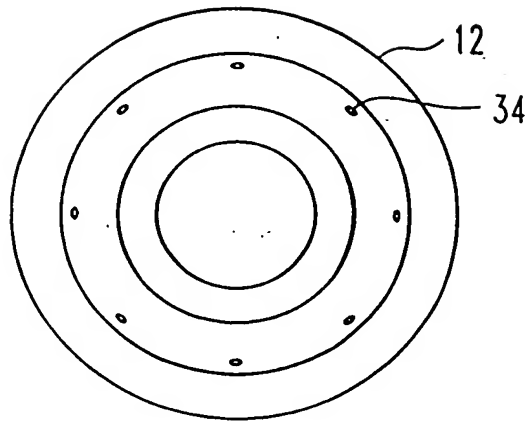


FIG. 5A

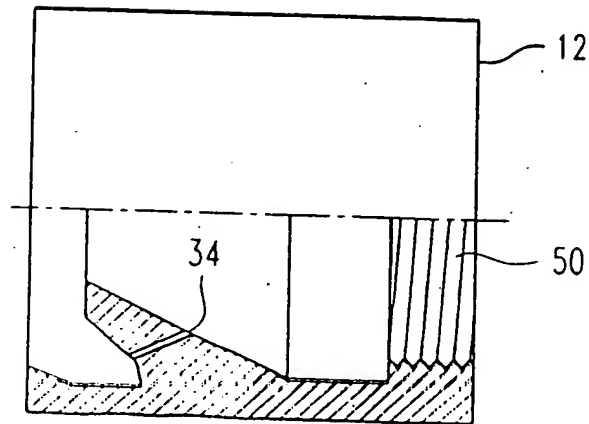


FIG. 5B

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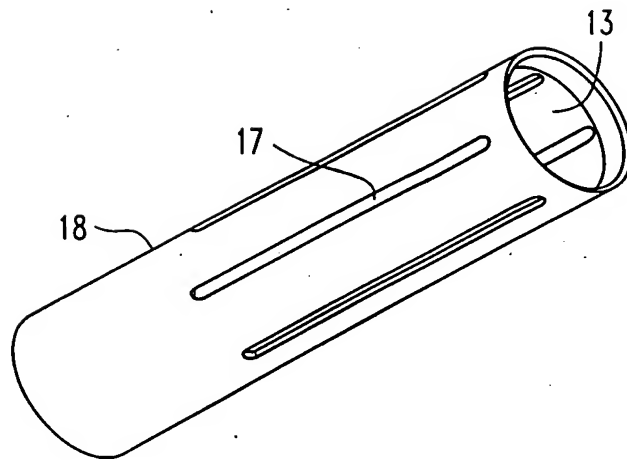


FIG. 6A

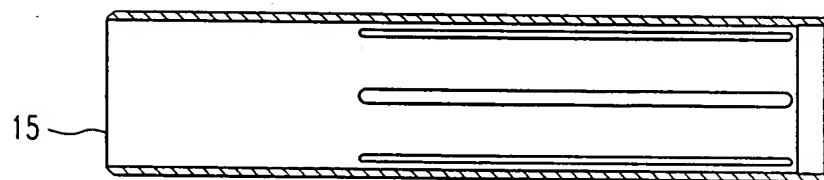


FIG. 6B

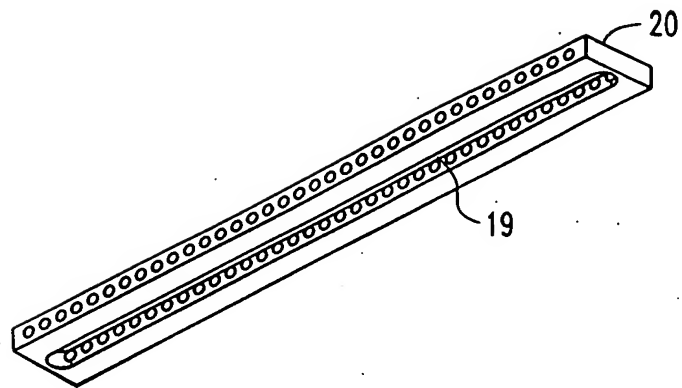


FIG. 7A

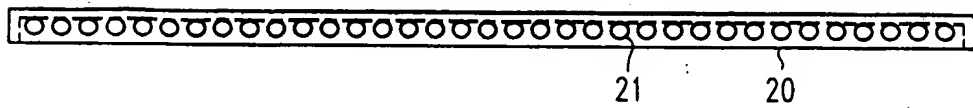


FIG. 7B

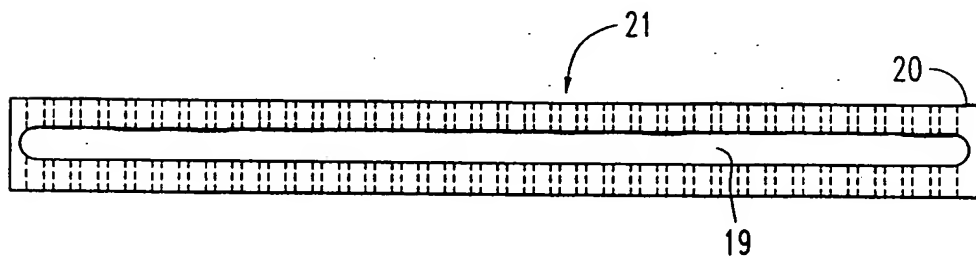


FIG. 7C

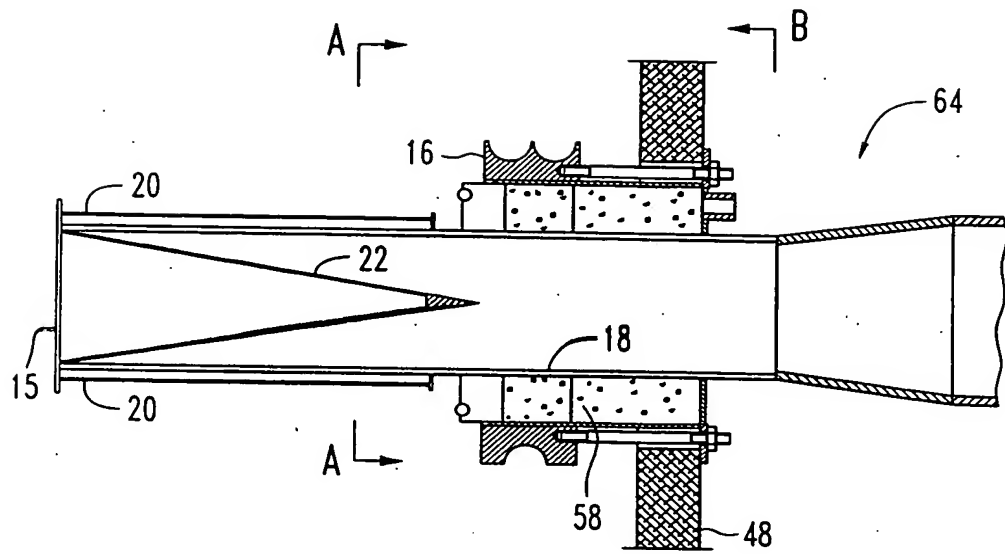


FIG. 8A

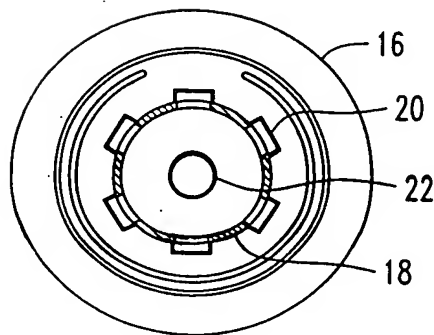


FIG. 8B

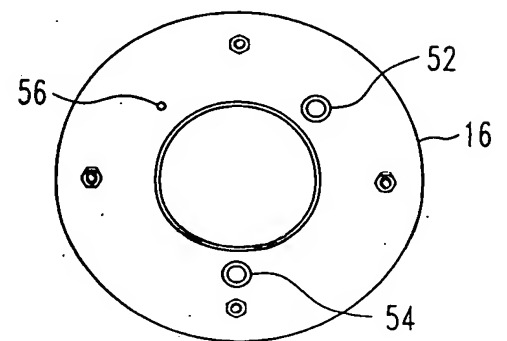


FIG. 8C

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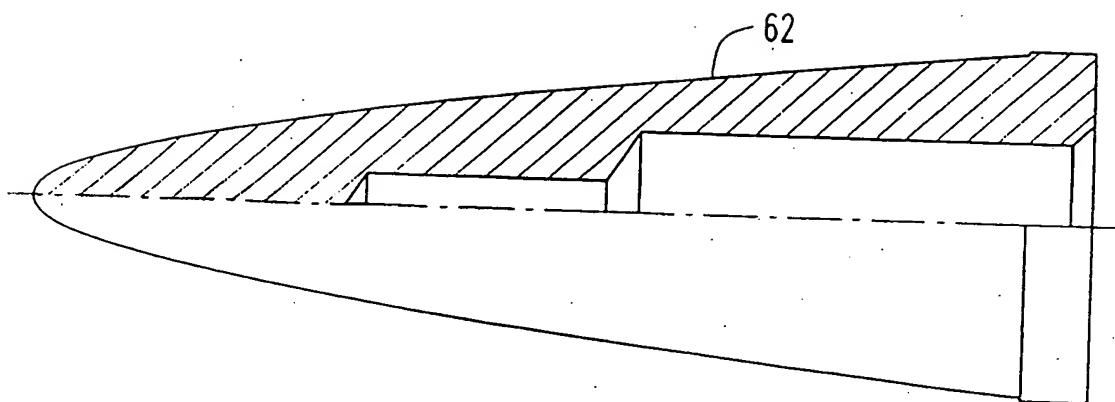


FIG. 9

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